FILATOV, B.S.; MAKURIN, N.S.; GAO LU-LIN' [Kao Lu-lin]; BAZHENOV, V.S.; BUENOV, Ye.S., red.

[Drilling wells using surfactants and aerated liquid] Burenie skvazhin s primeneniem poverkhnostno-aktivnykh veshchestv i aerirovannoi zhidkosti. Moskva, 1962. 48 p. (MIRA 17:4)

1. Russia (1923- U.S.S.R.) Ministerstvo geologii i okhrany nedr.

ZHVANETSKIY, Ye.F., red.; FILATOV, B.S., red.; ISAYEVA, V.V., ved. red.; VORONOVA, V.V., tekhn. red.

[Fluids for drilling wells; transactions of the inter-republic conference in Baku] Promyvochnye rastvory dlia bureniia skvazhin; trudy mezhrespublikanskogo soveshchaniia v Baku. Moskva, Gostoptekhizdat, 1962. 291 p.
(MIRA 15:9)

(Oil well drilling fluids)

LATYPOV, E.K.; FILATOV, B.S.

Installation for hydrodynamic studies of non-Newtonian fluids. Izv. vys. ucheb. zav.; neft' i gaz 5 no.3:85-90 '62. (MIRA 16:8)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti imeni akademika I.M. Gubkina.

FILATOV, Boris Semenovich; MAKURIN, Nikolay Stepanovich; ABRAMSON, Mikhail Grigor'yevich; KIRSANOV, Arkadiy Ivanovich; ISAYEVA, V.V., ved. red.

[Air drilling of exploratory holes] Burenie geologorazvedochnykh skvazhin s produvkoi vozdukhom. [By] B.S.Filatov i dr. Moskva, Nedra, 1964. 247 p. (MIRA 17:9)

VOLOKITINKOV, A.A.; KALININ, A.G.; MAKSAREVA, T.S.; FILATOV, B.S.

Using plastics to control circulation loss and water inflow in oil well drilling. Izv. vys. ucheb. zav.; geol. i razv. 7 no.9:114-122 S '64. (MIRA 17:10)

1. Moskovskiy geologorazvedochnyy institut imeni Ordzhonikidze.

KOSHKO, I.I.; FILATOV, B.S.; SURKOVA, A.P.

Air drilling for seismic prospecting. Razved. i okh. nedr. 30 no.11:54-58 N '64. (MIRA 18:4)

1. Moskovskiy ordena Trudovogo Krasnogo Znameni institut neftekhimicheskoy i gazovoy promyshlennosti imeni akademika I.M.Gubkina.

LEONOV, Ye.O.; FINAT'YEV, Yu.P.; FILATOV, B.S.

Pressure losses in casing space. Neft. khoz. 43 no.9:12-17 S '65.
(MIRA 18:10)

L 02412-67 EWT(1)/EWT(m)/EWP(e) WH/GD

ACC NR: AT6022334 SOURCE CODE: UR/0000/66/000/000/0005/0006

54
B+1

AUTHOR: Filatov, D. I.

ORG: None

TITLE: A quartz oscillator with low noise level

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio. 22d, 1966. Sektsiya radioperedayushchikh ustroystv. Doklady. Moscow, 1966, 5-6

TOPIC TAGS: quartz, crystal oscillator, signal modulation, signal to noise ratio

ABSTRACT: The author studies the effect which various disturbing processes have on the signal quality of a quartz generator. It was found that the intensity of phase fluctuations is affected basically by interference from flicker effect in the tubes, noises (pulsations) in the supply voltages, mechanical vibrations, acoustic effects and the magnetic fields of power sources. Standards for permissible levels of mechanical vibrations, acoustic effects, magnetic fields and supply voltage noises were established by determining the modulation characteristics for the quartz generator. The effects of the first three factors were eliminated by using stabilized power supplies with less than 100 μv side component and noise level in the 6 cps band at analysis frequencies of 10 cps and higher, and also by

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simple structural modifications (vibration damping and shielding). Thus it was found that phase fluctuations in the quartz oscillator could be easily reduced to the level determined by flicker effect alone. The following formula is given for the spectrum of phase fluctuations in the quasistatic approximation:

$$S\Phi(F)=\frac{f^2\alpha^2}{F^2Q^2}S\psi(F),$$

where f is the oscillator frequency, F is the modulation frequency, Q is the static figure of merit for the quartz oscillator $S\Phi(F)$ is the flicker effect in the oscillator tube and $\alpha\approx30$ is a factor which depends on operating conditions. The maximum figure of merit for industrial quartz resonators is presently $(1\text{-}3)\cdot10^6$ on frequencies of 1-5 Mc. The use of resonators of this type and tubes in the "N" series gives phase fluctuations of 130 db/cycle and 160 db/cycle on a modulation frequency of $5\cdot10^6$ cps for analysis frequencies of 10 cps and 100 cps respectively. Orig. art. has: 1 formula.

SUB CODE: 09 SUBM DATE: 31Mar66

MOREV, N.Ye.; ITSKOVICH, Ya.S.; GAGARINOV, B.N.; BUTUZOVA, A.N.; DUBOVA, B.I.; FILATOV, D.K.; KABANOV, V.I.

Mechanized TsNIIKHP-ML-1-59 make continuous production line for making shaped bread. Trudy TSNIIKHP no.8:12-15 '60. (MIRA 15:8)
(Bakers and bakeries--Equipment and supplies)
(Assembly-line methods)

FILATOV, D. P.

"Experiments in the experimental Androgenesis and Gynogenesis of silkworms (Bombyx Mori L)" Department of the Mechanics of Development. (Chief: D. P. Filatov), Institute of Experimental Biology (Director: N. K. Koltsov), Moscow, by Astaurov, B. L. (p. 3)

SO: Biological Journal (Biologicheskii Zhurnal) Vol. VI, 1937, No. 1

FILATOV, D. P.

"On the formation of organs without a regulatory process." Institute of Experimental Biology (Director: Academician N. K. Koltsov), Moscow. by Filatov, D. P.

SO: Biological Journal (Biologicheskii Zhurnal) Vol. VI, 1937, No. 2

FILATOV, PROF. D. P.

"The Influence Of The Transplantation Of Tadpole Extremity On Its Regeneration Capacity And On The Changes Occurring In It. Department Of The Mechanics Of Development (Chief: Prof. D. P. Filatov), Institute Of Experimental Biology (Director: Academician N. K. Koltsov), Moscow." (p. 489) by Yakovleva, T. M.

SO: PREDECESSOR OF JOURNAL OF GENERAL BIOLOGY. (Biologicheskii Zhurnal) Vol. VII, 1938 No. 3

FILATOV, D. P.

"Historical consideration of the phenomena of the mechanism of evolution and its meaning." (p. 3) by D. P. Filatov.

SO: Journal of General Biology (Zhurnal Obschei Biologii) Volume II No. 1, 1941.

FILATOV, D. P.

"Obituary." (pp. 129-34) by D. P. Filatov

SO: Journal of General Biology (Zhurnal Obshchei Biologii) Vol. 4, No. 3, 1943

FILATOV, D. P.

"Some Peculiar Features of the Formation of Balancers in Larvae of Pleurodeles Waltlii," Dokl. AN SSSR, 41, No.7, 1943

FILATOV, D. P.

"D. P. Filatov and his role in the mechanism of devolopment." (p. 313) by L. V. Polezhayev

SO: Journal of General Biology, Vol. 7, No. 5, 1944

NESMEYANOV, An.N.; BORISOV, Ye.A.; FILATOV, E.S.; KONDRATENKO, V.I.; CHZHAN TSZE-SYAN[Chang Chieh-hsiang]; PANNK, K.; SHUKLA, B.V.

Secondary reactions of the recoil atoms bromine-82 and bromine-80m in bromomethanes. Radiokhimiia 1 no.6:712-716 '59. (MIRA 13:4)
(Bromine--Isotopes) (Methane)

NESMEYANOV, A. N., FILATOV, E. S., BORISOV, Ye. A., SHUKLA, B. N. (USSR)

"Isotope Effect and Secondary Reactions of Bromine Recoil Atoms Accompanying (n,γ) Process".

paper submitted for the Symposium on the Chemical Effects of Nuclear Transformation (IAEA) Prague, 24-27 Oct. 1960.

S/186/61/003/005/014/022
E160/E185

AUTHORS: Nesmeyanov, An.N., and Filatov, E.S.

TITLE: The phase and isotope effects in the secondary reactions of bromine recoil atoms in the bromo-derivatives of methane

PERIODICAL: Radiokhimiya, v.3, no.5, 1961, 601-609

TEXTK The behaviour of CCl_3Br, CCl_2Br_2, $CHBr_3$, $CHFBr_2$, CH_2BrNO_2 and CBr_3NO_2 after bombardment with neutrons was investigated in order to verify the conflicting views of F.S. Rowland and W.F. Libby (Ref.4: J. Chem. Phys., v.21, 9, 1495 (1953)) that the isotope effect can be observed in solids only, and those of J. Willard (Ref.5: Ann. Rev. Nucl. Sci., v.3, 193 (1953)) that the effect may be observed in liquids. The experimental technique followed was the same as that described previously (An.N. Nesmeyanov, Ye.A. Borisov, I. Zvara, Ref.2: Radiokhimiya, v.1, 3, 325 (1959)). In the case of CCl_2Br_2, $CHBr_3$ and $CHFBr_2$, the dependence of the retention and the yield of

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The phase and isotope effects in ...

individual products on the concentration of free bromine added before the irradiation was studied. The effect of the temperature changes during irradiation on the secondary reactions following (n, γ)-reaction in CCl_2Br_2 was also investigated. It was found that after irradiation the retention of bromine in the solid CCl_3Br, CCl_2Br_2, $CHBr_3$, $CHFBr_2$ and CBr_3F is much greater than in the compounds in liquid state. There exists a linear relationship between retention and concentration of bromine in solid CCl_2Br_2 and $CHBr_3$, which suggests that only high energy reactions between the recoil atoms and the medium take place. Libby's supposition about the appearance of isotope effects in solids could not be confirmed for the compounds examined. Willard's views on the possible existence of the isotope effect in liquids were confirmed, but it follows from his supposition that retention should be greater for Br^{80m} than for Br^{82}. The results show the opposite to be true. The absence of the isotope effect in solids could probably be explained in terms of an increase in the rate of neutralisation of the charge on the recoil atoms of bromine with the rise in the bond strength between molecules in the molecular

The phase and isotope effects in ... S/186/61/003/005/014/022
E160/E185

Ref. 16: M. Milman,
J. Am. Chem. Soc., v.80, 21, 5592 (1958)

SUBMITTED: November 22, 1960

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5.4600

31892
S/186/61/003/005/015/022
E160/E185

AUTHORS: Nesmeyanov, An.N., Filatov, E.S., and Mansfel'd, A.

TITLE: Chemical action of the Br^{82} recoil atoms after (n, γ)- reaction on some derivatives of benzene

PERIODICAL: Radiokhimiya, v.3, no.5, 1961, 610-613

TEXT: In order to get a more detailed knowledge of the influence of the mass of colliding particles on the chemical reactions of recoil atoms, the substitution of Br^{82} recoil atoms, obtained in the reaction $Br^{81}(n,\gamma)Br^{82}$, with atoms or atom groups in benzene derivatives, was investigated. Mixtures of C_2H_5Br with C_6H_5Cl, C_6H_5I, $C_6H_5CH_3$ and $C_6H_5C_2H_5$ were irradiated with neutrons. The yields and activity retentions were recorded (see Table 1). It has been shown that the substitution of the monoatomic benzene derivatives by the Br^{82} recoil atom is in direct relationship with the mass ratio. Good agreement between the calculated (from $R_X = \alpha(E_2/E_1^o)$, derived on the assumption that elastic collisions of the Br - X type lead to C_6H_5Br

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Chemical action of the Br^{82} recoil ... 31892 S/186/61/003/005/015/022 E160/E185

formation, where E_1^o - energy of recoil atom before collision, E_2 - energy given to X, a - constant) and experimental yields, confirms the assumption that elastic collision mechanism operates in the formation of C_6H_5Br from halogen substituted benzenes. In the absence of complete experimental data on C_6H_5Br formation from alkyl benzenes, the reaction mechanism cannot be determined at present.

There are 1 figure, 2 tables and 5 references: 3 Soviet-bloc and 2 non-Soviet-bloc. The English language references read as follows:

Ref.4: J.M. Miller, R.W. Dodson.
J. Chem. Phys., v.18, 6, 865 (1950).
Ref.5: J. Willard.
Symposium on the Chem. Effects of the Nuclear Transformation. Prague (1960).

SUBMITTED: April 20, 1961

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Chemical action of the Br^{82} recoil.. 31892 S/186/61/003/005/015/022 E160/E185

Table 1

Solvent	Concentration (mol.%)	Yield (in %) C_2H_5Br	$C_2H_4Br_2$	C_6H_5Br	$CH_3C_6H_4Br$	Polymers	General retention
$C_6H_5CH_3$	95	3.7	4.9	8.6	-	-	34.9
	95	3.1	5.4	8.0	18.2	3.2	36.9
	92	4.9	6.4	7.3	17.1	4.1	39.8
$C_6H_5C_2H_5$	95	3.3	-	28.0	-	-	51.0
	92	5.2	-	25.0	-	-	53.9
C_6H_5Cl	95	2.0	-	21.6	-	-	52.4
	95	6.0	-	19.8	-	-	53.1
	90	11.0	-	20.4	-	-	49.5
C_6H_5I	95	1.8	2.3	17.8	-	-	37.0

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S/186/61/003/005/016/022
E160/E385

AUTHORS: Nesmeyanov, An.N. and Filatov, E.S.

TITLE: Chemical action on benzene of the Br^{82} and Hg^{203} recoil atoms produced by the $Br^{81}(n,\gamma)Br^{82}$ and $Hg^{202}(n,\gamma)Hg^{203}$ reactions

PERIODICAL: Radiokhimiya, v.3., no.5, 1961, 614 - 622

TEXT: In order to explain the mechanism of substitution of hydrogen by heavy recoil atoms the authors investigated the dependence on the quantitative composition of the mixture of the yields of various products, containing Br^{82}, obtained by neutron irradiation, from a Po-Be source, of solutions of C_2H_5Br in C_6H_6 and the yields of phenyl mercury bromide and bromobenzene obtained by neutron irradiation in a nuclear reactor of solutions of $HgBr_2$ in benzene. Solutions of C_2H_5Br in benzene, with concentrations varying from 1 to 100 mol.% were irradiated for 4-5 days with a neutron flux of 8×10^6 neutrons/sec, then the quantity of radioactive bromine in the

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Chemical action on ....

form of atoms, ions and various organic compounds was determined. The yields of products containing radioactive atoms of Br^{82}, obtained by irradiation of the system C_2H_5-C_6H_6, are given in Table 1 (1 - concentration of bromoethane in mol.%; 2 - yield, in %; 3 - total retention; 4 - polymers). Solutions of $HgBr_2$ in benzene, sealed in quartz ampules, were irradiated for 10 and 5 minutes, using a flux of 4×10^{12} neutrons/sec.cm^2. The analysis was carried out seven and thirty days after irradiation. Thus, the short-life isotopes Hg^{205} and Hg^{199} had time to decay and only Hg^{203} and Br^{82} remained (the activity of Hg^{197} was negligible). The yields of products containing radioactive Hg^{203} and Br^{82} caused by the (n,γ) reaction during irradiation of solutions of $HgBr_2$ in benzene are entered in Table 2 (I - analysis after 7 days, irradiation time 10 minutes; II, III - analysis after 30 days, irradiation time 5 minutes). The relationship between

Chemical action on ....

retention and quantitative composition of the mixture C_2H_5Br-C_6H_6 was investigated. For concentrations of C_2H_5Br in the 1.0 - 0.2 M range the retention changed only a little with dilution. In the 0.2 - 0.02 M range there was a sudden fall in the C_2H_5Br yield, which is attributed to a slow-down of the Br^{82} recoil atoms in benzene in the case of higher degrees of dilution. The yield of bromobenzene rises linearly with concentration in the 1.0 - 0.2 M C_2H_5Br range and remains almost constant in the 0.2 - 0 M range; the yield of $C_2H_4Br_2$ varies only little. Comparison of the relationship yield of bromobenzene concentration in the mixture C_2H_5Br-C_6H_6 with that of chlorobenzene in the mixture CCl_4-C_6H_6, published by J.M. Miller and R.W. Dodson (Ref. 9: J. Chem.Phys., 18, 6, 365, 1950) shows that the difference between the masses of Cl^{38} and Br^{82} accounts for the unequal energy transfer of the

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S/020/61/138/006/016/019
B103/B215

AUTHORS: Terent'yev, A. P., Corresponding Member AS USSR, Rode, V. V., Rukhadze, Ye. G., and Filatov, E. S.

TITLE: Determination of the molecular weight of chelate polymers

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 138, no. 6, 1961, 1361-1364

TEXT: The determination of the molecular weights of chelate polymers is difficult since they generally are solid, nonfusible, and insoluble substances (C. S. Marvell, N. Tarkoy. Ref.1: J. Am. Chem. Soc , 79,6000 (1957)). V. V. Korshak and assistants (Ref.2: Vysokomolek. soyed. 1,1764 (1959), Ref.3: ibid. 2,492 (1960), Ref.4: ibid. 498 (1960), Ref.4, ibid. 662 (1960)) assume that the molecular weight of metal polymers with different bis-β-diketones is not higher than 8000 - 10,000. It is known that chelate polymers contain three kinds of end groups in the molecule: $HLgn\left[-M-Lgn-\right]_n M-LgnH$ (1); $HLgn\left[-M-Lgn-\right]_n M-A$ (2); and $A\left[-M-Lgn-\right]_n M-A$ (3), where H is a hydrogen atom, H_2Lgn is a molecule

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Determination of the molecular ...

of the ligand containing 4 (and more) donor atoms, M is the ion of a bivalent metal, and A a monovalent anion. According to the conditions of polycondensation, polychelates with different end groups can be produced. An excess of metal salt causes the formation of anion groups at the ends of macromolecules. For case (3), the number of these groups (in %) is $A = \left[M_{2A}/M_{pol}\right]100$; $M_{pol} = \left[M_{2A}/A\right]100$. The authors determined the molecular weights of chelate polymers produced formerly:

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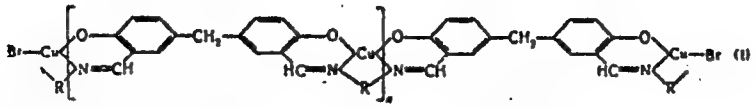
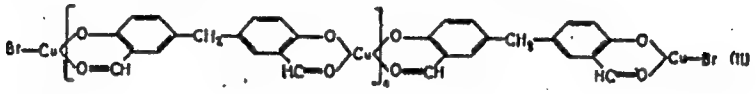
Determination of the molecular ...

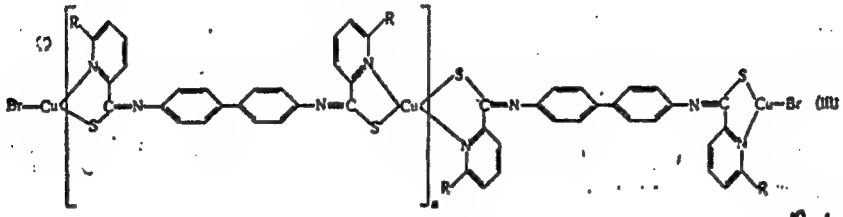


(I)

где R = 2H —; — $(CH_2)_8$— ,— $(CH_2)_6$ — и o-C_6H_4 —



(II)



(III)

№ 1.

где R = H — и CH_3 —.

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Determination of the molecular ...

All these polymers were synthesized with cupric bromide tagged with Br^{82}. Table 1 shows the molecular weights determined, and the polymerization coefficients of the chelate polymers calculated on the basis of Eq. (2). The percentage of the anion (A) was calculated to be the ratio between the portion of the Br^{82} activity in the precipitate and the activity introduced. The molecular weights are 3-4 times higher than those obtained by other scientists. The authors explain the lower molecular weight of (III) by the different stability of the chelate node, in the macrochain. In polymer (I) the molecular weight changes according to R. The authors proved this to depend upon the different oxidizabilities of the amines participating in the reaction. The higher the oxidizability of an amine, the faster the rupture of the chain and the lower the molecular weight of the polymer. Since amines also oxidize when left standing in solutions, the molecular weight of a polychelate decreases due to a longer period between the preparation of the solution of an easily oxidizable amine and its application. Such amines in this case were: hexamethylene diamine ((I)R = $-(CH_2)_6-$) and o-phenylene diamine ((I)R = $o\text{-}C_6H_4-$). The reaction with a newly prepared solution yielded the highest molecular weights.

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When left standing for 3-5 hr, the molecular weight of the polymers was only 50% (in agreement with Ref.1). When left standing for 48 hr and more, low-molecular compounds are formed. With other structures ((I)R = 2H—; (I)R = —$(CH_2)_2$—) the molecular weights remain constant even after 48 hr.

Polymers (I) may be produced by the method of nascent reagents and also from polymeric Schiff's bases. The average molecular weight is not affected by the method of synthesis. The authors reproduced their methods of determination with a monomer of analogous structure, namely copper salicylal ethylene diamine, to examine whether bromine anions are bound by the polymer surface. The actual molecular weights of polychelates would thus seem to be too low. The authors found that the copper complex, corresponding to theory, in fact does not contain radioactive bromine, i.e., binding did not take place. The method of determining the molecular weights of the above chelate polymers described by the authors yields stable, reproducible results. There are 2 tables and 9 references: 8 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication is given in the body of the abstract.

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25340
S/020/61/138/006/016/019
B103/B215

Determination of the molecular ...

ASSOCIATION: Moskovskiy gosudarstvenyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: February 24, 1961

Card 6/7

NESMEYANOV, An.N.; FILATOV, E.S.

Phase and isotope effects in the secondary reactions of bromine recoil atoms in bromo derivatives of methane. Radiokhimii 3 no.5:601-609 '61. (MIRA 14:10)
(Methane) (Bromine--Isotopes)

NESMEYANOV, An.N.; FILATOV, E.S.; MANSFEL'D, A.

Chemical effect of Br^{82} recoil atoms after (n, γ)-reactions on some benzene derivatives. Radiokhimiia 3 no.5:610-613 '61. (MIRA 14:10)

(Bromine--Isotopes) (Benzene) (Radiochemistry)

NESMEYANOV, An.N.; FILATOV, E.S.

Chemical effect on benzene of Br^{82} and Hg^{203} recoil atoms formed in the reactions $Br^{81}(n,\gamma)Br^{82}$ and $Hg^{202}(n,\gamma)Hg^{203}$. Radiokhimiia 3 no.5:614-622 '61. (MIRA 14:10)
(Bromine--Isotopes) (Mercury--Isotopes) (Benzene) (Radiochemistry)

FILATOV, E., inzh.

"Hot" atoms. IUn.tekh. 6 no.12:31-32 D '61. (MIRA 14:12)
(Atomic energy--Juvenile literature)

FILATOV, E.S.

Chemical effects of nuclear transformations. Isotopic effect in the secondary reactions of recoil atoms present in the (n,γ)-process. Usp.khim. 31 no.6:752-768 Je '62. (MIRA 15:5)

1. Moskovskiy gosudarstvennyy universitet, Khimicheskiy fakul'tet, kafedra radiokhimii.

(Radioisotopes) (Nuclear reactions)

NESMEYANOV, An.N.; FILATOV, E.S.

Role of high energy reactions in the processes of stabilization of bromine 82 hot atoms in alkyl bromides. Radiokhimiia 5 no.3:378-389 '63. (MIRA 16:10)

(Bromine isotopes) (Alkyl bromides)

NESMEYANOV, An.N.; TSZYAN TAY-VAN [Chiang T'ai-wang]; FILATOV, E.S.

Interaction of hot atoms of tritium with aliphatic alcohols in the liquid phase. Radiokhimiia 5 no.4:515-516 '63.
(MIRA 16:10)

(Tritium) (Alcohols)

FILATOV, E.S.; NESMEYANOV, An.N.; CHEPYZHEV, Yu.B.

Study of the yields of the reaction Br^{81} (,)Br^{82} in the system CH_2Br_2 - C_6H_6. Vest.Mosk.un. Ser.2:Khim. 18 no.6:45-46 N-D '63. (MIRA 17:4)

1. Kafedra radiokhimii Moskovskogo universiteta.

[redacted]

[redacted] effect of the energy [redacted]
[redacted] the reaction

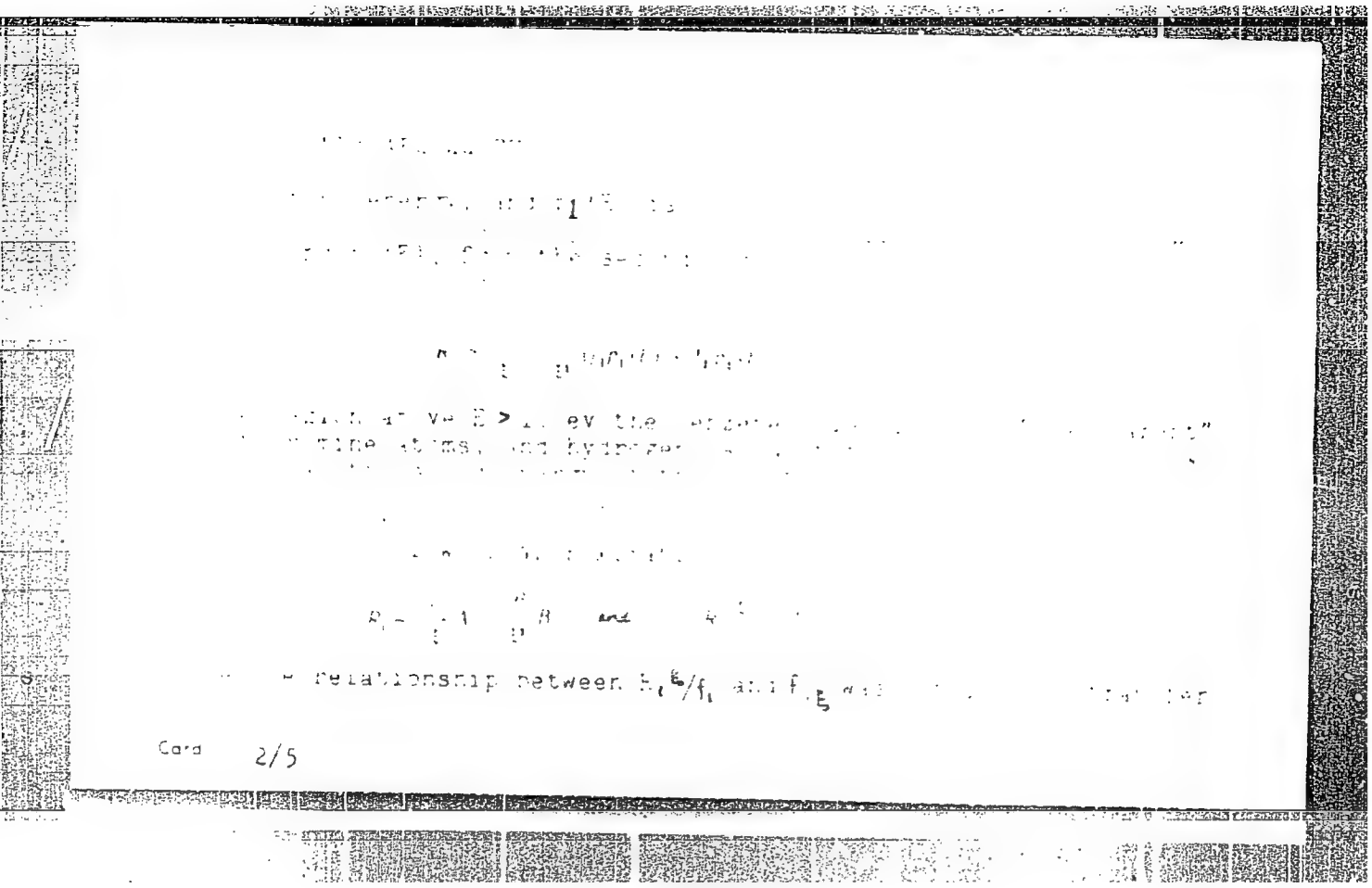
[redacted] Moscow. Universitet. Vestnik. Ser. [redacted]
[redacted]

TOPIC TAGS: hot atom, activation energy transfer, intermolecular [redacted] energy transfer, elast[redacted]

[redacted]

$$R_i = \frac{\pi}{\xi} \rho_i(\bar{E}) \frac{\pi}{\xi^2} \rho_i(\bar{E}) \left| f_1 \rho_i(\bar{E}) + f_2 \rho_i(\bar{E}) \right|. \qquad (1)$$

where R_i is the probability of the reaction, ξ is the mean logarithmic



Card 2/5

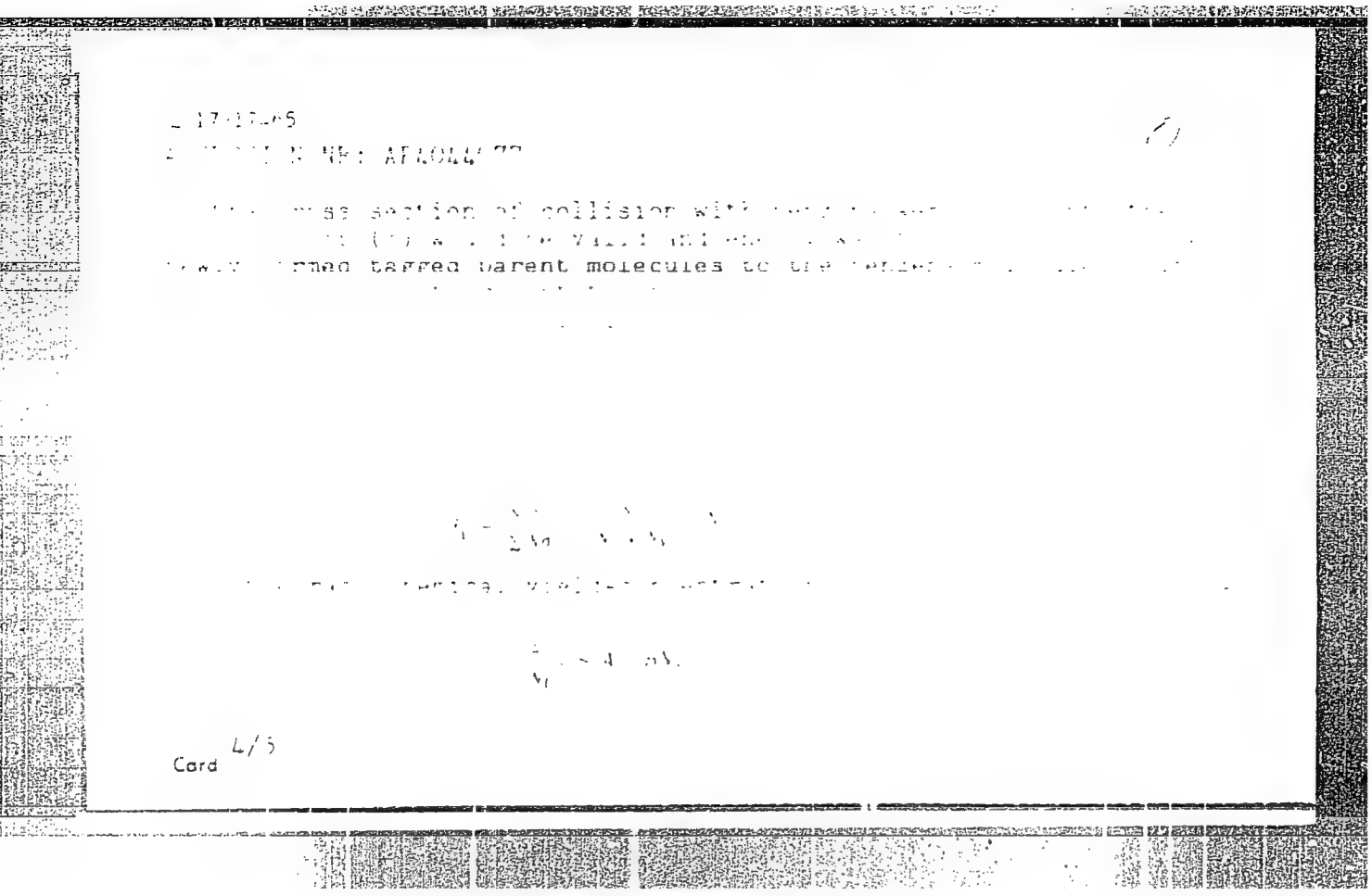
ACCESSION NR: AP4044077

[illegible] from the tagged C$_4$H$_9$Br[illegible]

$$\frac{\alpha R_i}{R_0} = f_1 = \frac{1}{1 + \frac{N_1}{N_2}\frac{\sigma_1}{\sigma_2}}$$

[illegible] σ_1 are the microscopic cross [illegible] hot bromine atom with bromine atoms and w[illegible] respectively, N_1 is the molar portion [illegible] mixture with benzene; and α is the "coefficient of survival". The ratio σ_1/σ_2 was not constant. If the cross section [illegible] of hot bromine atoms with benzene were not [illegible] increase in benzene concentration, then the transfer or energy did not affect the yield of tagged products and relationship (a) obtained;

Card 3/5



Card 4/5

L 12917-65
ACCESSION NR: AP4041077

This was true in the cyclopentane-cyclo[illegible]
[illegible]ane-benzene system $\sigma_1 \neq \sigma_2$ and the [illegible]
[illegible]
[illegible]
[illegible]mr curves. Additional [illegible]
[illegible]

ASSOCIATION: MGU Kafedra radiokhimii (Moscow State University, Department of Radiochemistry)

SUB CODE: NP NR REF SOV: [illegible] OTH REF: 07

Card 5/5

VASHAROSH, L.; FILATOV, E.S.; NESMEYANOV, An.N.

Chemical action of Cl^{38} recoil atoms in chloromethanes. Particular features of the yield of Cl^{37} (n, γ) Cl^{38} reaction as compared with Br^{81} (n, γ) Br^{82} reaction. Radiokhimiia 6 no.4:484-490 '64. (MIRA 18:4)

FILATOV, E.S.; NESMEYANOV, An.N.; CHEPYZHEV, Yu.B.

Reactions of hot bromine atoms in liquid binary systems. Radiokhimiia 6 no.5:595-604 '64. (MIRA 18:1)

[redacted], [redacted]

[redacted] of the process of [redacted] energy transfer on the hot atom [redacted]. Vest.Mosk.un-ta. Ser.2, Khim., 19 no.2:13-18 Mr-Ap '64. (MIRA 18:8)

1. Kafedra radiokhimii Moskovskogo universiteta.

NESMEYANOV, An.N.; TSZYAN TAY-YAN [Chiang T'ai-wang]; FILATOV, E.S.

Reactions of tritium hot atoms and the process of excitation energy transfer. Vest. Mosk. un. Ser. 2: Khim. 19 no.6: 27-28 N-D '64. (MIRA 18:3)

1. Kafedra radiokhimii Moskovskogo universiteta.

FILATOV, E. S.; KOLTAY, L.; NESMEYANOV, A. N.

"Models of atom-molecule collisions and hot atom reactions."

report presented at IAEA Symp on Chemical Effects associated with Nuclear Reactions and Radioactive Transformations, Vienna, 7-11 Dec 64.

FILATOV, E.S.

Mechanism underlying the elementary event of a hot reaction. Zap. khim. 34 no.9:3607-3647 S '65. (MIRA 18:10)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova, khimicheskiy fakul'tet, kafedra radiokhimii.

FILATOV, E. Ya.

See FILATOV, Ye. Ya.

SINYUK, I.I., inzh.; FILATOV, E.Ya., inzh.

Strain measurement of frame structures. Trakt.i sel'khozmash. 31 no.2:27-28 F '61. (MIRA 14:7)

(Strain gauges) (Agricultural machinery)

FILATOV, E. Ya.

Instrument for the statistical treatment of oscillographic recordings. Zav.lab. 27 no.2:210-212 '61. (MIRA 14:3)

1. Institut liteynogo proizvodstva AN USSR.
(Oscillography)

S/0122/65/000/002/0016/0019

Filatov, E. Ya. (Candidate of technical sciences); Nersesyan, R. A., Engineer

TITLE: Application of electronic computers in analyzing the endurance of parts

SOURCE: Vestnik mashinostroyeniya, no. 2, 1965, 16-19

TOPIC TAGS: endurance limit, service life, statistical analysis, electronic computer

ABSTRACT: Application of electronic computers in analyzing the endurance of parts is discussed, primarily qualitatively. Statistical methods of analyzing the endurance of parts operating under nonconstant or transient loads can significantly improve the prediction of their useful life. Electronic computers [illegible] reduce the work involved in such an analysis from several hundred hours to one hour. The authors state that the [illegible] computers in these problems is as follows: the input contains data on operational conditions (normally in the form of oscillograph traces [illegible] magnetic tape), on the resistance of the part to fatigue and on the use [illegible] the output from the computer yields values characterizing the service life with the

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ACCESSION NR: AP5007073

associated failure probability. Based on previous work by E. Ya. Filatov [illegible] elya statisticheskoy obrabotki ostsillograficheskikh zapisey- "Zavodskaya [illegible]ya," 1961, No. 2), an experimental device for the statistical analysis [illegible] illograph traces (on paper) was successfully built and tested in 1963 [illegible] and the Mechanics Institute of the AN SSSR. The importance of a program algorithm in using a computer is stressed. An algorithm for a program [illegible] input and output as described above) based on the Pearson and [illegible] is presented. This algorithm can also be used for statistical analysis of other processes and can be used on any [illegible] type [illegible] "Strela," "Minsk" and "Nazdan." Comparison of results obtained [illegible] algorithm to hand-calculated results shows the [illegible]. Orig. art. has: 1 table.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: DP, IE

NO REF SOV: 005 OTHER: 002

Card 2/2

FILATOV, E.Ya.

Conference on the fatigue of structures and materials. Prikl. mekh. 1 no.3:141-142 '65. (MIRA 18:7)

1. FILATOV, F. G.

2. USSR (600)

4. Tobacco

7. Our experience in growing makhorka. Tabak 13 no. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

FILATOV, F.I.

Some reasons for circuitous hauls on the railroads. Zhel.dor. transp. 39 no.6:21-24 Je '57. (MLRA 10:7)

1. Nachal'nik tekhnicheskogo otdela Yushno-Ural'skoy dorogi.
(Railroads--Management)

34061

S/701/61/000/000/002/005
B124/B138

18.8400 (2408)

AUTHORS: Sukhenko, K. A., Filatov, F. I., Galonov, P. P., Moiseyeva, K. A., Metelina, L. D.

TITLE: The analysis of aluminum alloys with a multichannel quantometer

SOURCE: Fotoelektricheskiye metody spektral'nogo analiza; sbornik statey. Moscow, Oborongiz, 1961, p. 44 - 65

TEXT: 100 mm long wires 7 mm in diameter, and cast electrodes and disks 50 mm in diameter and 40 - 50 mm thick, made of АМг (AMg) and duraluminum were analyzed with a 85-channel quantometer supplied by the firm ARL in the USA. The spectroscopic assembly consists of four constituent parts: (1) spectrometer with diffraction grating, slits, photomultipliers, and stand; (2) amplifying and recording device and timing relay; (3) adjustable high-accuracy light source, and (4) frequency and voltage stabilizer. A 1.5 m concave-ruled diffraction grating (960 lines/mm) is attached to the exit slot. The spectral range is 1500 and 7700 Å. Optical and electric diagrams are shown in Fig. 6. Hemispherical or truncated-cone graphite and

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The analysis of aluminum ...

carbon electrodes are recommended. An air-conditioner supplied by Sulzer (Switzerland) is recommended for maintaining a constant temperature of 21 ± 0.5°C and humidity of 45 ± 2.5%. Analytical lines and operating conditions for the analysis of specially prepared standards of steel and Al, Mg, Ni, and Ti alloys are given in Table 1. Attenuators are selected in dependence on the concentration ranges of each element contained in the alloy (Table 4). The reproducibility of results obtained for AMg and duraluminum is shown in Tables 5 and 6. Analysis of 6 - 7 elements takes 2 - 3 minutes, with the automatic device. The accuracy (except copper) is 1 - 2%. and is somewhat higher when wire samples are used. There are 15 figures and 6 tables.

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Fig. 6. Optical and electric diagram of the apparatus. Legend: (A) Voltage and frequency stabilizer; (B) Low-voltage exciting circuit; (C) mains; (D) Voltage stabilization 220 v ± 1%; 50 cps ± 1%; (E) High-voltage spark; (F) Rotary chopper; (G) Spark stand; (H) Stationary electrode; (J) Rowland's circle; (K) Photomultiplier tubes; (L) inlet slit; (M) exit slits; (N) visible region of the spectrum; (O) Sample; (P) diffraction grating; (Q) ultraviolet region of the spectrum; (R) Spectrometer; (S) Amplifying and recording device; (T) Sensitivity control; (U) Channels; (V) Calibration dial; (W) recorder; (X) Electrometer; (Y) Integrators; (Z) Relay.

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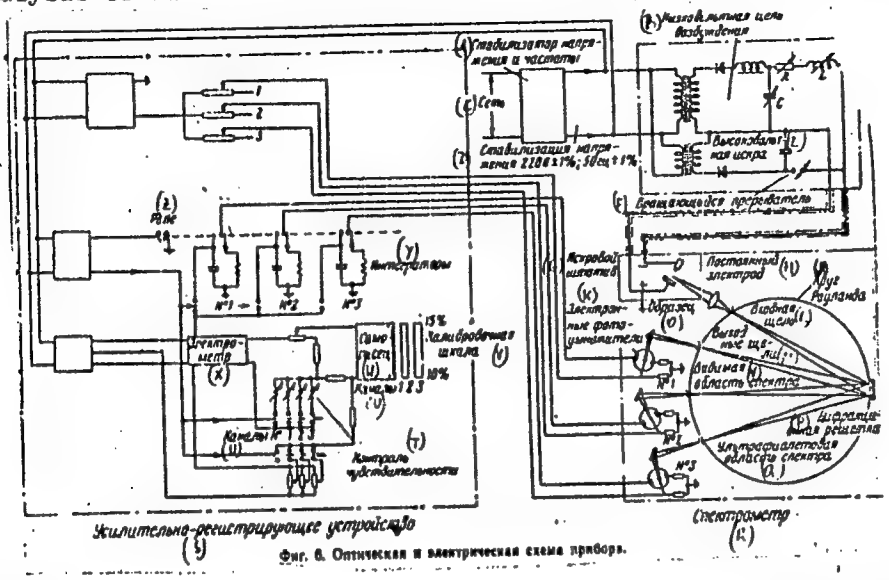
Fig. 6.



Фиг. 6. Оптическая и электрическая схема прибора.

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Table 1. Operating program of the ARL quantometer . Legend: (A) Elements; (B) Spectral lines; (C) Panel No. for exit slits; (D) Concentration ranges, in %, for the analysis of different alloys and steels; (E) Alloy steels; (F) low-voltage spark; (G) trace elements in steels; (H) titanium steels; (I) high-voltage spark; (J) nickel alloys; (K) aluminum alloys; (L) magnesium alloys; (M) Number of integrator; (N) Number of photomultiplier; (O) Number of channel; (P) Reference line; (R) Screen; (S) Undispersed light; (T) There are 23 integrators in all, 38 photomultipliers, 85 measuring channels; (U) Notes. 1. A, B, C, D, E, and F indicate the group of the alloys. 2. Screens are necessary to protect the photomultipliers against strong flux of light.

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Table 1.

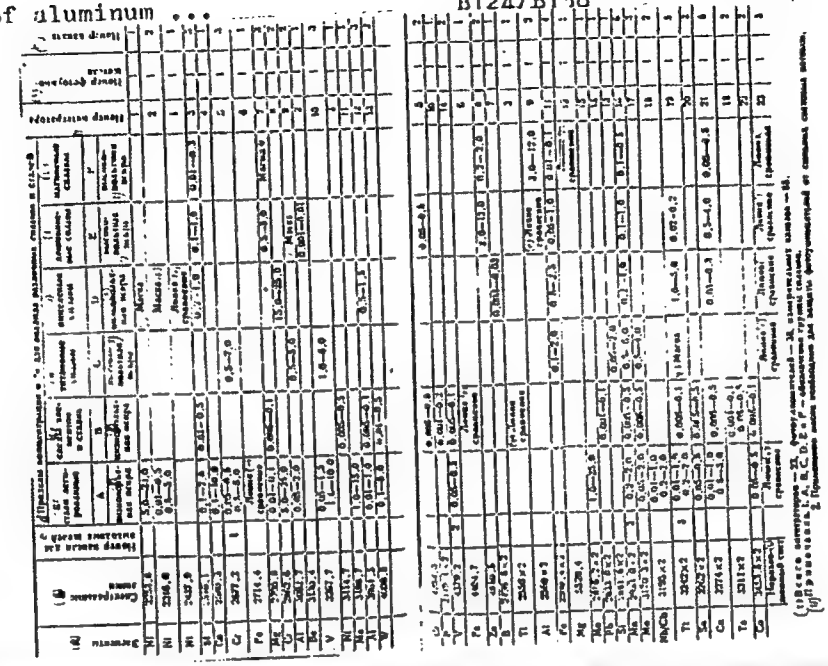

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Table 4. Selection of the attenuators. Legend: (A) Number of attenuator; (B) Element; (C) Position of attenuator; (D) AMr; (E) Duralumin; (F) Copper; (G) Beryllium; (H) Magnesium; (J) Iron; (K) Silicon; (L) Manganese; (M) Zinc; (N) Titanium; (P) Aluminum.

(A) Номер аттенюатора	(B) Элемент	(C) Положение аттенюатора	
		(D) AMr	дуралюмин
44	Медь (F)	12	8
11	Бериллий (G)	10	—
8	Магний (H)	4	10
30	(J) Железо	12	12
4	Кремний (K)	13	13
39	Марганец (L)	15	8
26	Цинк (M)	17	—
42	Титан (N)	25	—
29	Алюминий (P)	10	10

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Table 5. Reproducibility of analytical results for AMg-type aluminum alloys and duralumin (high-voltage spark used as the source of light). Legend: (A) Analytical lines, Å; (B) Mean arithmetical error, in %, of 20 to 40 determinations; (C) AMg, wire; (D) AMg, cast bars; (E) AMg, disks; (F) Duralumin, bars, wire; (G) Duralumin, disks; (H) Concentration ranges determined for both alloys; (J) Reference line; (K) Note. The carbon stationary electrode is hemispherical.

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Table 5.

Аналитические линии (A), Å	(7) Средняя арифметическая ошибка в % из 20—40 определений					(H) Пределы определяемых концентраций по обоим сплавам
	(C) АМг, тянутая проволока	(D) АМг, прутки литые	(E) АМг, диски	(I) Дуралюмин, прутки, тянутая проволока	(G) Дуралюмин, диски	
Cu 3274	±1,2	±2,5	±2,7	±3,6	±5,0	0,07—6,9
Mg 2790	±2,5	±3,5	±2,0	±2,0	±1,5	0,08—7,5
Fe 2599	±0,73	±3,6	±2,0	±0,9	±1,8	0,10—1,6
Si 2516	±1,2	±2,2	±2,6	±1,5	±1,5	0,06—1,9
Mn 2933	±2,5	±4,2	±1,0	±2,0	±2,0	0,20—1,9
Be 3130	±1,0	—	—	—	—	0,001—0,008
Al 2568	Линия сравнения		—	—	—	—

(K) Примечание. Постоянный электрод — уголь, заточенный по форме полусферы.

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...alysis of aluminum ...

Table 6. Reproducibility of the analytical lines of the duralumin-type aluminum alloy (low-voltage spark used as the source of light). Legend: (A) Analytical lines, Å; (B) Mean arithmetic error, in % of 60 determinations; (C) Duralumin, disks; (D) Range of concentrations determined; (E) Reference line.

(A) Аналитические линии Å	(B) Средняя арифметическая ошибка в % из 60 определений	
	(C) дуралюмин, диски	(D) пределы определяемых концентраций
Cu 3274	±1,6	1,0—6,1
Mg 2790	±2,65	0,5—2,0
Fe 2599	±3,3	0,4—2,0
Mn 2933	±2,8	0,2—1,1
Al 2568	(E) Линия сравнения	

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3406

S/701/61/000/000/004/005
B124/B138

18.8400

AUTHORS: Sukhenko, K. A., Filatov, F. I., Moiseyeva, K. A., Galonov, P. P. Metelina, L. D.

TITLE: Determination of boron in nickel alloys

SOURCE: Fotoelektricheskiye metody spektral'nogo analiza; sbornik statey, Moscow, Oborongiz, 1961, p. 82 - 86

TEXT: The medium-dispersion quartz spectrograph ИСП-28 (ISP-28) and the diffraction-grating spectrograph ДФС-13 (DFS-13) and the ARL quantometer (USA) were used to determine the boron content of three types of nickel alloys. Operating conditions are given in Table 1. Optimum results were obtained with low-voltage spark; the mean arithmetical error for a sample containing 0.02% B was ±6%. T. M. Faytel'son and T. Ye. Sharovatova are mentioned. There are 4 figures and 2 tables.

Table 1. Conditions for the multichannel quantometer determination of boron in a nickel alloy. Legend: (A) Low-voltage spark; (B) Arc with spark gap; (C) ... microfarads; (D) ... microhenry; (E) ...

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S/701/61/000/000/004/005
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... v; (F) ...ohms; (G) U_{ign}; (H) Analytical distance; (J) Sample "+"; carbon auxiliary electrode, hemispherical; (K) Sample "-"; carbon auxiliary electrode, hemispherical.

(A) Низковольтная искра	(B) Дуга с искровым режимом
C=10 мкф; L=50 мкгн; U=250 в; $U_{вт}$=1000 в; R=5 ом.	C=60 мкф; L=360 мкгн; U=200 в; $U_{вт}$=300 в; R=45 ом; I=4 а.
(H) Аналитический промежуток d=3,0 мм	(H) Аналитический промежуток d=3,0 мм
(J) Образец „+"; подставной электрод С, заточка по форме полусферы	(K) Образец „—"; подставной электрод С, заточка по форме полусферы

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S/032/62/028/002/025/037
B124/B101

AUTHORS: Filatov, F. I., and Kolpashnikov, A. I.

TITLE: Determination of residual stresses in brake drums of airplane tires

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 2, 1962, 223-224

TEXT: A method based on the change of resistance to deformation before and after cutting out the places of attachment of the strain gauges on brake drums made of the magnesium alloy ВМ65-1 (VM65-1) was used to determine the relevant residual stresses. The glue БФ-4 (BF-4) was found to give most satisfactory results after drying for 24 hrs at 60°C. Tests were performed with punched VM65-1 drums hardened at 170°C for 24 hrs, and then mechanically treated, and on drums tempered at 170°C for 6 hrs following the mechanical treatment. Strain gauges were glued to joints on two planes perpendicular to each other. One was used to measure the radial and axial components of the stresses, and the other to measure the tangential components. After attachment of the strain gauges the resistances are measured with an ЭИД-3 (EID-3) electronic deformation-

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Determination of residual stresses ...

measuring device, the accuracy of which is, according to the calibrating apparatus of the TsNIITMash, $\pm 0.2 \cdot 10^{-5}$ deformation units, equivalent to an error in measurement of about $\pm$ 0.08 kg/mm^2. A compensating gauge was used to compensate for temperature changes during measurement. The results are shown in the accompanying figure in the form of average values of four measured deformations. The tensile strength of punched VM65-1 drums varied from 26 to 31 kg/mm^2. An analysis of these results shows that the amount of residual stresses is small, particularly in tempered drums and cannot influence their strength. P. I. Potapov, A. M. Yermilov, B. Ya. Tolmachev, and A. Ya. Kharitonov took part in this work. There is 1 figure.

Fig. Numerical values of residual stresses in non-tempered (a) and tempered (б) drums: ○ tangential stresses; = radial and axial stresses. The sign + indicates compressive stress, the sign - tensile stress; the values of stresses are given in kg/mm^2. Legend: (A) not measured.

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FILATOV, F. I.

Filatov, F. I. Instruments and Methods of Measuring Resistance to Deformation of Metals and Alloys. p.120

Korneyev, N. I.; I. G. Skugarev; and F. I. Filatov. Study of Flow Pressure of Certain Alloys. p.134

Pressure Treatment of Alloys; Collection of Articles, Moscow, Oborongiz, 1958, 141pp.

27042

S/182/61/000/004/002/007
D038/D112

18.1130

AUTHORS: Korneyev, N.I., Morokhovets, G.M., Filatov, F.I. and Manych, V.P.

TITLE: Investigations on the technological ductility of stainless steels

PERIODICAL: Kuznechno-shtampovochnoye proizvodstvo, no. 4, 1961, 9-12

TEXT: The authors state that perlitic and martensitic steels are highly ductile during hot deformation, and that heat-resistant iron- and nickel-base steels have a limited ductility since their ductility is determined by the content of alloying elements as Al, Ti, B, etc. The article deals with an investigation on the forgeability of the Soviet martensitic and semi-austenitic steels listed in table 1. The Х 17Н2 (Kh17N2) and ЭИ736 (EI736) steel grades were tested in the preliminary deformed state without heat treatment, and the ЭИ 904 (EI904), ЭИ 925 (EI925), ЭИ 961 (EI961) and ЭИ643 (EI643) steels in the forged and deformed state without heat treatment. Forgeability was evaluated on the basis of results of tensile compression and impact tests at temperatures of 600-1300°C. The test results revealed that the EI-736, EI-961, and EI-643 steels can be press or hammer forged or rolled within a rather wide temperature range, and with a high degree of deformation, as shown in table 2. However, the permissible total deformations listed in this table apply only to the upper limits of the temperature range, and cannot be

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used for the lower temperatures. Gas-turbine discs forged with a degree of deformation exceeding 65% and completed below 900°C show sharp anisotropy of mechanical properties, especially impact properties. The EI-904 and in particular the EI-925 steels have poor forgeability (Fig. 3); whilst undergoing forging operations, they should not be heated above 1100-1120°C, and total deformation ought not to exceed 50-60%, even in the preforged state. These steels are also sensitive to the rate of deformation. In hammer forging they show almost twice as much resistance to deformation as in press forging, even at temperatures as low as 900°C. In the case of large forgings or in the processing of large (10-ton) ingots the sensitivity of the steels is a serious limitation. Some heats of the EI-904 and the EI-925 steels showed a considerably better forgeability, however, and can be hot worked at 1200-850°C without difficulty. On the other hand, other heats of the same steel develop forging cracks after being heated for forging to 1150 ± 20°C but become ductile on being heated to 1200-1240°C. Presumably, this difference in behavior is caused by a differing content of delta-ferrite. This assumption was confirmed experimentally by flat-die hammer forging of two experimental heats of EI-925 steel containing 9 and 19% delta-ferrite, respectively. The authors conclude that further work should be done to establish the dependence of the effect of delta-ferrite on the ductility of steel. There are 5 figures, and 2 tables.

Card 2/5

FILATOV, Fedor Ivanovich

"Increasing the Seed Yield of Perennial Grasses," Sov. agron., No.4, 1949

Inst. Grain Culture of Southeast

FILATOV, F. I.

"The Cultivation of Perennial Grasses in Field and Forage Crop Rotation in the Southeast USSR," 1950

1. FILATOV, F. I.

2. USSR (600)

4. Agriculture

7. Agrobiological principles of cultivating perennial grasses in the Southeast U.S.S.R. Saratov, Obl. gos. izd., 1951

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

FILATOV, F.I.

Vozdelyvanie mnogoletnikh trav
(Cultivation of perennial grasses). 2 izd. Saratov,
Saratovskoe oblast. gos. izd-vo, 1952. 170 p.

SO: Monthly List of Russian Accessions, Vol. 6, No. 1, April 1953

FILATOV, F.I.

New book on Michurin genetics ("Fundamental problems in Michurin genetics." N.I.Feiginson. Reviewed by F.I.Filatov). Izv. AN SSSR. Ser.biol. no.4:139-143 Jl-Ag '56. (MLRA 9:10)

1. Nauchno-issledovatel'skiy institut sel'skogo khozyaystva Yugo-Vostoka, Saratov.
(GENETICS) (FEIGINSON, N.I.)

M

USSR/Cultivated Plants - Fodders.

Abs Jour : Ref Zhur Biol., No 12, 1958, 53677

Author : Filatov, F.I., Kuz'min, V.D.
Inst :
Title : What Did the Experimental Sowings of Sorghum Japonicum in 1956 in the Saratovskaya Oblast' Show?

Orig Pub : S. kh. Povolzh'ya, 1957, No 5, 46-49

Abstract : The trials of Sorghum japonicum on the Sovkhozes (state farm) of the most arid parts of the Oblast' showed its very late maturity in comparison with sorghum (Sorghum vulgare). The best result was obtained by wide-row planting. At that time the yield of the green bulk was 168 cwt/ha. This did not surpass the yield of Chinese sugar cane (S. saccharatum) which is more valuable from the standpoint of feed quality. -- I.N. Zaikina

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DUBROVIN, Ye.; KARMAL'SKIY, O.; FILATOV, G.; LOKOTKOV, A.; LEBEDINSKIY, A.; BARANOV, I.; MITSEVICH, P.; BABENKO, Ye.; GOLITSYN, A. (Ozery, Moskovskoy obl.); SHCHEPOTIN, I. (Ozery, Moskovskoy obl.); KHALANGOT, A. (Snezhnoye, donetskoy obl.); KUZ'MIC[redacted], N. (Snezhnoye, Donetskoy obl.); SIRITSA, A., inzh. po ratsionalizatsii

This is the way we live. Izobr. i rats. no.10:4-5, 23 '63.
(MIRA 17:2)

1. Chlen soveta obshchestvennogo konstruktorskogo byuro zavoda im. V.I. Lenina (for Karmal'skiy). 2. Predsedatel' Amurskogo oblastnogo soveta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov (for Filatov). 3. Predsedatel' Chelyabinskogo promyshlennogo oblastnogo soveta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov (for Lokotkov). 4. Starshiy [redacted] Odesskogo zavoda imeni Dzerzhinskogo (for Lebedinskiy). 5. Predsedatel' zavodskogo soveta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov (for Baranov). 6. Predsedatel' soveta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov Irkutskogo zavoda tyazhelogo mashinostroyeniya imeni Kuybysheva (for Mitsevich).

FILATOV, G. (selo Verkhniy Lyubash Kurskoy oblasti)

Feldsher Vasilii Vladimirovich Tret'iakov. Fel'd. i akush. 21 no.7:60-61 Jl '56. (MLRA 9:10)
(TRET'IAKOV, VASILII VLADIMIROVICH, 1884-)

1.1210
11.8200

28348 S/124/61/000/007/010/044
A052/A101

AUTHORS: Volin, B. P., Troshin, Ya. K., Filatov, G. I., Shchelkin, K. I.

TITLE: On the reacton-kinetic nature of heterogeneities in the shock front and the part played by them in the process of propagation of gas detonation

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 7, 1961, 7, abstract 7B47 ("Zh. prikl. mekhan. i tekhn. fiz" no. 2, 1960, 78-89)

TEXT: The process of origination of heterogeneities in the forward front of a flat detonation layer is considered theoretically. The disturbance develops in the ignition front and propagates over the front with the velocity of sound in the shock-compressed gas a_1. In the direction of propagation of detonation the disturbance is drifted by the flow behind the forward shock front and overtakes the front at the moment

$$t = \frac{\lambda}{a_1 - (D - \omega)}$$

where λ - the width of detonation zone, D - the velocity of detonation, ω - the

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velocity of shock-compressed gas in the laboratory system of coordinates. By this moment t the disturbance over the ignition front will have the diameter

$$\Delta y \sim \tau D \frac{2(\gamma - 1)/(\gamma + 1)}{1 - 1/\sqrt{2\gamma/(\gamma - 1)}} \gamma D \beta \qquad (1)$$

where τ - the period of the induction of ignition, $\gamma = c_p/c_v$ - the ratio of specific heats, $\beta \approx 0.5 \div 0.4$ at $\gamma = 1.4 \div 1.3$. The identification of Δy with the experimentally observed dimension of heterogeneities enables one to consider equation (1) as the dependence of the mean dimension of such heterogeneities on reaction-kinetic and gas-dynamic factors. The results of experiments on obtaining the track imprints of detonation wave on faceplates covered prior to the experiment with a thin layer of carbon black are described. Another proof has been found of the existence of heterogeneities, not only near the wall of the detonation tube, but over the whole surface of the detonation front in the tubes as well. It is shown that such heterogeneities exist also in the spherical detonation wave. It is found out that the total number of heterogeneities over the whole detonation front increases with the surface of the front. The authors arrive at a conclusion that spherical detonation, like the gas detonation in tubes, is pulsating one, that heterogeneities in its front emerge spontaneously, and that these heterogeneities are not connected with the presence

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On the reacton-kinetic nature ...

of walls of the detonation container. To bring the fact of multiplication of pulsations with the increase of the surface of detonation front in agreement with the periodical mechanism of detonation, the authors consider it necessary to complement the conception of the mechanism of detonation combustion, given in another study (Denisov, Yu. N., Troshin, Ya. K. Zh. prikl. mekhan. i tekhn. fiz. no. 1, 1960, 21-35), by introducing into the detonation cycle one more link of instability being the source of emergence of breaks in the shock front. A criterion of the limit of existence of the spin and pulsating detonations is also given. There are 23 references.

Yu. Denisov

[Abstracter's note: Complete translation]

Card 3/3

FILATOV, G.I.

Health education work in Verkhnyi Liubazh District, Kursk Province. Zdrav.Ros.Feder. 1 no.6:24-26 Je '57. (MLRA 10:8)

1. Zaveduyushchiy Verkhne-Lyubazhskim rayonnym otdelom zdravookhraneniya.
(VERKHNIY LIUBAZH DISTRICT--HEALTH EDUCATION)

FILATOV, G.I.

Working with intermediate medical personnel in a district.
Zdrav.Ros.Feder. 2 no.7:31-34 J1'58 (MIRA 11:7)

1. Slushatel' zaochnogo otdeleniya kafedry organizatsii zdravookhraneniya (zav. - prof. N.A. Vinogradov) TSentral'nogo instituta usovershenstvovaniya vrachey.
(VERKHNIY LYUBAZH DISTRICT--MEDICINE, RURAL)

FILATOV, G.I., klinicheskiy ordinator

Result of fungous disease prevention in Verkhniy Lyubazh District, Kursk Province region. Vest.derm. i ven. 33 no.3:51-54 My-Je '59. (MIRA 12:9)

1. Iz kafedry kozhnykh i venericheskikh bolezney (zav. - dotsent V.G.Andreyev) Kurskogo meditsinskogo instituta (dir. - prof.A.V. Savel'yev).

(FUNGUS DISEASES, prev. & control in Russia (Rus))

FILATOV, G.I. (Verkhne-Lyubazhskiy rayon Kurskoy oblasti)

Control of fungous diseases in rural areas. Sov.zdrav. 18 no.11: 24-28 '59. (MIRA 13:3)
(RURAL HEALTH)
(MYCOSIS prev. & control.)

FILATOV, G.I. (Belgorod)

Fungus diseases in Belgorod Province from 1956 to 1960.
Vest. derm. i ven. 37 no.1:73-74 Ja'63. (MIRA 16:10)
(BELGOROD PROVINCE—MYCOSIS)

L 9555-66 FSS-2/EWT(1)/EWP(m)/EWT(m)/EWP(j)/T/FCS(k)/EWA(c)/EIC(=)/EWA(1)
ACC NR: AP5026062 RPL WW/JW/WE/RM SOURCE CODE: UR/0405/65/000/002/0012/0021

55 55 55 55

AUTHOR: Gordeyev, V. Ye.; Serbinov, A. I.; Troshin, Ya. K.; Filatov, G. I. (Deceased)

78
B

ORG: none

TITLE: Initiation of the explosive conversion of condensed explosives by gaseous detonation

SOURCE: Nauchno-tekhnicheskiye problemy goreniya i vzryva, no. 2, 1965, 12-21

1,55 55,6

TOPIC TAGS: gaseous detonation, liquid explosive, tetranitromethane, benzene, methane, oxygen, ignition delay, detonation wave, detonation velocity

ABSTRACT: Initiation of the detonation of a tetranitromethane-benzene mixture (1.5:1 by volume) by detonating a stoichiometric methane-oxygen mixture was studied photographically using an experimental setup consisting of a thick-wall steel pipe with a 76-mm external diameter and a 10-mm internal diameter and a plexiglass tube with a 30-mm external diameter and a 10-mm internal diameter. The steel pipe was equipped with an electric detonator and was filled with the gaseous mixture. The plexiglas tube was filled with the liquid (or solid) explosive. The initial gas mixture pressure varied between 0.1 and 60 atm abs. Detonation of the liquid explosive by the reflected wave of the gaseous detonation occurred only at the initial gaseous mixture pressure of $p_0 \geq 2$ atm abs. The liquid explosion delay time τ decreased from 350 to 10 μsec as the initial pressure in the gaseous mixture increased from 2 to 12 atm

Card 1/2 UDC: 532.595.2+534.222.2

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ACC NR: AP5026062 O

abs. At pressures of 24 atm abs., the ignition delay practically disappears, i.e., the explosive ignites instantly on contact with the gaseous detonation wave. Transition of accelerating combustion into detonation of the explosive occurred within 30 μsec after ignition. A stoichiometric tetranitromethane-benzene mixture (4:1) is even more sensitive to the gaseous detonation; it is detonated at $p_0 \geq 0.66$ atm abs. with a delay time of 70 μsec. The change in the ignition delay is attributed to the difference in the surface temperature of the explosive T_s. The delay time was measured at various temperatures and the experimental data were used to calculate T_s, which vary between 712 and 841K, depending on τ. The same values of T_s (about 800K) were also obtained by a different method, which takes into account thermal conductivity, specific heats, and densities of the components of the gaseous mixture and of the combustion products. At the initial gas mixture pressure below 60 atm abs., the detonation velocities in both gases (about 2300 m/sec) and in the liquid explosive (6850 m/sec) are practically independent of pressure. Orig. art. has: 5 tables, 2 figures, and 4 formulas. [PS]

SUB CODE: FP/ SUBM DATE: 30Nov64/ ORIG REF: 016/ OTH REF: 001/ ATD PRESS: 4157

Card 2/2

FILATOV, G.M.

All employees take part in the competitions. Vest. sviazi 23 no. 7:27-29 Jl '63. (MIRA 17:2)

1. Nachal'nik Mogilevskoy direktsii radiotranslyatsionnykh setey.

1964

FILATOV, G. M.

Textile Industry

c. '64

FILATOV, G.S.

V 402 Cygni. Per. zvezdy 11 no.6:474-475 My '57. (MIRA 12:1)

1.Stalinabadskaya astronomicheskaya observatoriya AN Tadzhikskoy SSR.

(Stars, Variable)

FILATOV, G.S.

Investigating 26 variable stars. Astron. tsir. no.182:14-16 Je '57.
(MIRA 11:3)

1. Stalinabadskaya astronomicheskaya observatoriya.
(Stars, Variable)